CLAIMS

1. A pattern grooving machine for cutting non-linear grooves in a flat, plastic floor covering, the machine comprising

a power router adapted to receive a rotatable router blade,

a trimmer base affixed to the router, the trimmer base having an opening through which the router blade extends when in use,

a base plate affixed to the trimmer base, the base plate comprising

a central opening,

a first guide member disposed to one side of the central opening,

a second guide member disposed to another side of the central opening, and

at least one pair of rollers disposed to each side of said base plate.

2. The pattern grooving machine of claim 1, further comprising at least one pair of rollers supported by said base plate to facilitate movement of the apparatus along a flat layer.

3. The pattern grooving machine of claim 1, wherein the first guide member and the second guide member are cylindrical, the first guide member having a diameter less than the diameter of the second guide member.

4. The pattern grooving machine of claim 3, wherein the diameter of the first guide members is about 1/16 in. and the diameter of the second guide member is about 1/8 in.

5. The pattern grooving machine of claim 2, wherein the rollers are supported at opposite sides of the base plate.

6. The pattern grooving machine of claim 5, wherein the rollers have a diameter greater than the thickness of the base plate.

7. The pattern grooving machine of claim 2, wherein the rollers provide a virtual plane surface that extends in a plane parallel to a surface of the base plate and spaced therefrom.

8. The pattern grooving machine of claim 2, wherein the base plate is adapted to be disposed in spaced relationship to the trimmer base.

9. A router die, comprising a base plate having a central opening, said base plate adapted to support a first guide member disposed to one side of said opening, and a second guide member disposed to another side of said opening, the size of said second guide member being greater than that of said first guide member.

10. The router die of claim 9, further comprising at least one pair of rollers supported by said base plate to facilitate movement of the router die along a flat layer when cutting a groove.

11. The router die of claim 10, wherein the first guide member and the second guide member are cylindrical, the first guide member having a diameter less than the diameter of the second guide member.

12. The router die of claim 11, wherein the diameter of the first guide members is about 1/16 in. and the diameter of the second guide member is about 1/8 in.

13. The router die of claim 10, wherein the rollers extend from opposite sides of the base plate.

14. The router die of claim 13, wherein the rollers have a diameter greater than the thickness of the base plate.

15. The router die of claim 10, wherein the rollers provide a virtual plane surface that extends in a plane parallel to a surface of the base plate and spaced therefrom.

16. The router die of claim 10, wherein the base plate is disposed in spaced relationship to the trimmer base.

17. A method for forming decorative patterns in floor coverings, the method comprising the steps of

placing a template having a desired pattern on the floor,

covering the template with a layer of floor covering material so as to cause an outline of the pattern to be formed in the covering layer,

scribing a first line in the covering layer corresponding to the desired pattern,

cutting through the covering layer along the first scribe line and removing the floor covering material that overlaps the template,

scribing a second line in the remaining covering layer corresponding to the desired pattern and removing the floor covering material between the first and second scribe lines to create a gap between an edge of the template and an edge of the floor covering material,

guiding a router die along the created gap to create a widened and smooth groove,

removing the floor covering material from creating the widened and smoothed groove,

filling the widened and smoothed groove with a plastic material to enhance the desired pattern with a decorative effect.

18. The method of claim 17, wherein the desired pattern is a floor covering material.

19. The method of claim 17, further comprising the step of applying a heat weldable material to fill this groove with a plastic material and create a decorative border.

20. The method of claim 17, wherein the router die is guided along the path of the groove by front and back guide members.

21. The method of claim 20 wherein the front guide member has a diameter corresponding substantially to the width of the created gap and the second guide member has a diameter corresponding substantially to the width of the created widened and smoothed groove.

22. The method of claim 17, wherein the step of scribing a second line cuts through the floor covering material.